ARMED FORCES INSTITUTE OF PATHOLOGY
ORAL HISTORY PROGRAM

SUBJECT: Dr. Lorenz E. Zimmerman
INTERVIEWER: Charles Stuart Kennedy
DATE: January 27, 1993

Q: Dr. Zimmerman, I wonder if you could give me a bit about your background. In the first place, when and where were you born, and then something about your family background and your early education.

DR. ZIMMERMAN: I was born on November 15, 1920, right here in Washington at Columbia Hospital. I was a Cesarean baby. I lived my entire life, for all practical purposes, here in Washington and had all of my education here. I went through the public school system in Washington. Went to George Washington University for both undergraduate studies and also for medical school. I did my internship at the old Gallinger Municipal Hospital, which has now become the D.C. General Hospital, and then had residency training at Walter Reed Army Hospital.

Q: Back a little bit, what did your father do, and what attracted you towards medicine?

DR. ZIMMERMAN: Well, it certainly was not through the family or through any acquaintances. My parents were both immigrants from Europe--my father from Germany, my mother from Switzerland. There were no physicians in our family. I just find it difficult to understand, but even as a small child, in the hospital for any reason, even if it was to visit somebody who was ill, I always had a tremendous fascination for what was going on in the confines of the hospital, and I aspired someday to be one of these guys in white coats, running around the halls. It just had a tremendous fascination for me, for unexplained reasons.

Q: You went to George Washington University Hospital for your medical training. Can you compare and contrast how medical training was then? This was in the 1930s, wasn't it?

DR. ZIMMERMAN: No, I graduated from high school in '39, graduated from medical school in '45, so I was in medical school during the war years, between '42 and '45. Things were much more primitive then. As a matter of fact, at George Washington, we were in the old medical school building on H Street, which has long since been destroyed for the nice new facilities that are now available. Technology wasn't nearly as advanced as it is today. As a matter of fact, none of the schools in Washington were at that time regarded as high-tech schools. They were regarded as excellent places to go for bedside training, and I think both George Washington and Georgetown had excellent reputations for turning out good, capable physicians, but it was not one of the high-tech schools of its

day.

Q: Did you think of concentrating on any particular field as you were going through training?

DR. ZIMMERMAN: Yes, actually from the second year, when I had my introductory basic course in pathology, pathology struck me as being the most stimulating, most interesting of all the courses. Although I did periodically deviate and think that I might want to become a surgeon or an OB/GYN man, these were transient periods, and I kept coming back to pathology as being the thing that really interested me most.
Q: What was it about pathology that took your interest?

DR. ZIMMERMAN: Well, I think partly it was the way pathology was taught to us at that time. The faculty at George Washington in pathology were individuals who taught pathology from the standpoint of how to understand the basis for a patient's signs and symptoms of various diseases. It was not taught, as it was being taught in many other schools, as a discipline of basic science where everything could be approached experimentally. We were taught more the relevancy of pathology to understanding things that were necessary to be understood if you were going to be a good clinician. So I think it was that approach that appealed to me, and has continued to appeal to me.

I think I really didn't understand my own thinking about pathology so much until I was an intern and had to make some decisions about where I was going to go for what kind of training.

At that time, during my internship, I became fascinated with internal medicine, and, as a matter of fact, applied to the Mayo Clinic for a fellowship in internal medicine. Then it dawned on me that I was seeing many patients whose symptoms and whose complaints were more referable to things going on in their heads rather than in their sick bodies, that there was this tremendous overlay of psychosomatic medicine, and that a lot of the practice of internal medicine was practice of psychology or psychiatry. This did not have the appeal to me as did people who were sick because they had serious organic disease. I finally realized that if I didn't want to see patients whose problems were more in their heads than in their bodies, that I ought to stick with genuine pathology. This was the basic realization that led me to decide to go back to pathology as my main discipline.

Q: Well, as a Washington boy, I wonder if you found yourself drifting down to the old Army Medical Museum on the Mall, the Red Brick Building and all?

DR. ZIMMERMAN: Yes, I certainly had that exposure. Actually my father, who was a person who was very proud of various institutions in the City of Washington, used to love to take visitors on sightseeing tours, and I often accompanied him when he did that, and one of the places that we often visited was the old Army Medical Museum.

But what I recall most was, when I was a premed student at George Washington, there were times when the premed students were offered an opportunity to visit the

Medical Museum and actually to see some of the things that were available that the public ordinarily didn't get to see. So we felt rather privileged by being premed students and having access to things that were not on public display.

So those were the two things that I do recall about the Museum.

Q: At that time, it wasn't the Armed Forces Institute of Pathology, but it was obviously the Army's center for pathology. As you began to look into pathology as a career, were you getting anything concerning the reputation of the Army Medical Museum and its work in pathology?

DR. ZIMMERMAN: I really did not get to appreciate the importance of the old Army Medical Museum as an important medical educational institution until I became a resident. I think I had a little bit of insight during my medical school days, because we did have occasional individuals from the Army Medical Museum who lectured to us. But mainly it was during my residency, when I really started reading the current publications and learning more about the current affairs in pathology, that I began to appreciate what a preeminent institution the old Army Medical Museum was.

Q: You took your residency where?

DR. ZIMMERMAN: At Walter Reed.

Q: Right where we're speaking today. Again, was this in any particular field, or was this a fairly general residency?

DR. ZIMMERMAN: It was a residency in pathology, and I had training in both clinical pathology and pathologic anatomy, although pathologic anatomy is what really interested me most.

Q: Was there any particular concentration on the part of the Army? This was sort of the inter-war period, after World War II and before the Korean War. Were there any particular types of cases that you were seeing at that time, particularly that Walter Reed was concentrating on?

DR. ZIMMERMAN: Actually we were seeing a broad spectrum of general diseases. We still were seeing a heavy concentration of young adult males, but also many dependents who were being hospitalized at Walter Reed, and a fair amount of pediatric work. As a matter of fact, one of the things that really convinced me that Walter Reed was a great place to go to for training in pathology was a pediatric case.

At that time, I was a general-duty medical officer in the Pentagon, assigned to the physical exam sections, where all we did all day long, day after day, was to examine healthy officers who had not had an annual physical during the war years. This was the first year after the end of the war, and before they could be either returned to civil life or

promoted or whatever, they needed a physical exam. There's nothing more boring than to be examining healthy males all day long, day in and day out. I knew at that time that I wanted to get residency training in pathology, but I had at least another year and a half of payback time before I would be able to get out of the service and seek a civilian residency.

Q: You might explain what you mean by payback time.

DR. ZIMMERMAN: I had my medical school training in an Army uniform during World War II, and as a result of this free medical education, we were expected to pay back a certain number of years of service before we had the option of leaving the service for civilian endeavors. And at that time, I anticipated that I would leave the service and seek training in a civilian institution. But it was the fact that I was locked into doing these physical exams for another year and a half or so that I didn't think I could tolerate that that long.

I learned that there was an opening in the training program at Walter Reed, but to get into that program, I had to join the Regular Army. So I did apply for admission to the Regular Army and was admitted into the residency at Walter Reed.

But before making the formal application, I went out to look over Walter Reed's Laboratory service to see what was going on. Fortuitously, they were doing a postmortem examination on a small child who had died rather suddenly. The Chief of Laboratory Service, Colonel Virgil Cornell [when he was a major, Virgil H. Conrell had served as the 17th Curator of the Army Medical Museum], was a man who always, through his long military career, (he was then nearing the end of his career), had been very much interested in infectious diseases and in bacteriology. He learned from the clinical manifestations of this child, who had died within a day or so of admission to the hospital, that the child probably had an acute meningococcal septicemia and probably also had an early meningitis. He undertook various microbiologic tests; he obtained samples of blood, skin lesions and also the spinal fluid. Before the pathologist who was doing the postmortem examination had completed the autopsy, he already had proof that this child had died of an overwhelming acute meningococcal septicemia.

That impressed me! The scientific approach and the rapidity with which they were able to establish a definitive diagnosis even before completing the full autopsy. So I was convinced that Walter Reed would be a good place to go for my residency training. And I was never disappointed in having made that choice.

Q: At that time, there was no particular relation between Walter Reed and the Army Medical Museum, was there?

DR. ZIMMERMAN: No, the relationship was no different from that which existed between other military installations and the Medical Museum. All through the war, there were certain directives as to what individual hospital pathologists *must* send to the museum, and what they *could* send if they elected to, and what they *shouldn't* send.

There was a laundry list, so to speak, of what should be sent and what should not be sent, and then certain options were available, too. So we had an interaction with the Medical Museum. In my current field of ophthalmic pathology, for example, there was a very definite directive: All eyes should be formalin-fixed, left unopened and sent directly to the Army Medical Museum.

Q: This was the '47 to '50 period.

DR. ZIMMERMAN: Right. [By this time the Museum's name had already officially changed to the Army Institute of Pathology (in 1946), and then to the Armed Forces Institute of Pathology in 1949.]

Q: Why was that?

DR. ZIMMERMAN: It was because there was neither the technical expertise nor the pathologic expertise amongst individuals in various military installations to do a satisfactory job of handling eyes. It requires special training, both at the technical level and at the pathologists' level. This training and this expertise were not available, even in academia. There were only a few institutions around the country that could do a creditable job of ophthalmic pathology. And so, rather than get stuff sent in that looked more like hamburgers than a piece of an eyeball, the policy had been established, many years before I got involved in any way, that all eyes would be left intact, in a jar of formalin, and sent to the Army Medical Museum for study.

Q: Let's say, excluding the work with eyes, for example, you had the Army Medical Museum at that time doing pathology, and you were doing pathology at Walter Reed, a preeminent Army hospital. I would have imagined there would have been a certain amount of, well, why send us down there, we know as much as they do, or something like that, on other types of pathology. Did you find there was a certain, oh, I won't say rivalry, but a sort of do-it-yourself type thing at Walter Reed?

DR. ZIMMERMAN: I was never really aware of any such rivalry. As a matter of fact, it was a two-way street. There are certain things that pathologists working close to the bedside, close to the scene, have an opportunity to do that people at a tertiary institution, like the Army Medical Museum of the old days, or like the AFIP of today, are not equipped to do as well as are pathologists working in an institution where they have availability of fresh tissue, tissue that has not yet been exposed to formaldehyde. There are many things that can be done more satisfactorily in a hospital setting than can be done at a referral laboratory.

On the other hand, what the Army Medical Museum had done extremely well (as a matter of fact so well that it became a model that subsequently became a pattern that one civilian institution after another emulated even to this day) was to develop a staff of super-specialists that, I guess, began with those areas in which Colonel Ash, who was the

director of the Museum in the war years...

Q: He was there from '29 to '31 and then from '37 to '46 as the director.

DR. ZIMMERMAN: Right, well, it would have been in that '37 to '46 period. He knew very well the deficiencies that existed among pathologists who were called to duty during mobilization for World War II.

For example, in the field of infectious and exotic diseases, most medical schools were teaching virtually nothing. So he felt a crash course in the pathology of exotic infections was very important. Likewise there were other areas, such as neuropathology, ophthalmic and ENT pathology, pathology of the skin, pathology of the kidney, etd. that were not being done as well as they might have if an individual had had the opportunity to develop full-time expertise working in such a limited field. All through the war years, the staff gradually became super-specialized, in the sense that certain pathologists did only neuropathology, others did mainly skin pathology, others did only bone pathology, and so on. And that began the pattern that has continued to the present day.

So that one of the really strong features that began with the old Army Medical Museum, the development of individuals who were super, super, super-specialists in limited fields of pathology that was unparalleled in even big teaching hospitals, like Walter Reed, or in the big teaching hospitals connected with university medical centers, like Johns Hopkins or the hospitals associated with Harvard and so on. They, at that time, did not boast the broad spectrum beganof super-specialist training in pathology that was available at the old Army Medical Museum.

Actually, by the time I got into training in pathology at Walter Reed, it had metamorphosed from the Museum to the Army Institute of Pathology, which it remained until the unification that occurred after World War II.

Q: By this time, you were in the regular Army, in the Medical Corps. In 1950 you got caught up in our next war, then, I guess.

DR. ZIMMERMAN: Yes, actually I was already slated to go the 406th Medical General Lab in Tokyo upon completion of my residency. So I was on the books to go there even before the Korean War erupted. Actually the completion of my residency coincided with...

Q: June 25, 1950, a date that those of us of a certain age remember very well.

DR. ZIMMERMAN: Right. So I was on two-weeks' leave, before taking off for Japan, when the Korean War began. Soon after I got to Tokyo, to the 406th Medical General Lab, I began preparations for taking a mobile medical laboratory into Korea, which I did about four months later.

Q: This would have been about when?

DR. ZIMMERMAN: The lab left for Korea in November of 1950.

Q: This was a rather difficult period. This was after the Inchon landing, but before the Chinese entered the war.

DR. ZIMMERMAN: Exactly. You have the time perfectly, because when we left Tokyo, we thought we were going to be occupation troops, and the morale was quite low. We felt, gee, the war is over, MacArthur was going to have the troops home for Christmas, we would just be sitting around looking for something to do. I flew over. The rest of the lab was shipped over, so it took over a week for our equipment to arrive. And during that period is when the Chinese moved in with the North Koreans and pushed the troops back. As soon as we arrived, the 8th Army surgeon, Colonel Dovell, said, "Get your unit down to Pusan. We don't want you up here in the way."

"What'll I do in Pusan?"

"Well, take care of the prisoners of war."

They were catching prisoners of war who were dying in great numbers because they were in such bad shape, not just from war injuries, but also from systemic diseases, all sorts of infectious diseases--a lot of tuberculosis, a lot of bacterial and parasitic infections.

So that is what my lab did for the remainder of the year that I was in charge. We just supported the hospital that had been set up to take care of the North Korean and Chinese prisoners of war.

Q: Were you in Pusan or on Koje-do?

DR. ZIMMERMAN: That was before Koje-do was...

Q: Koje-do being the island which eventually was used as a prisoner-of-war base.

DR. ZIMMERMAN: That's right. That was being developed just at about the time that I completed my year in Korea. Before Koje-do Island was developed, the prisoner-of-war camp was on the outskirts of Pusan.

Q: I'd like to go into this a little, about medical treatment and dealing with these prisoners, because, at least later, this became a major, really major, political thing, because the North Korean Communists more or less seized control of the prison compound on Koje-do. At that time, was it difficult getting to work with the prisoners?

DR. ZIMMERMAN: You see, my lab personnel and I were not actually living in the POW hospital. We were attached to an Army station hospital, for rations and quarters and administration and so on, because our lab unit was a small unit. And since I was not a clinician involved in the clinical management of these poor, wretched people, I really

can't speak to that issue.

Q: You were just getting specimens.

DR. ZIMMERMAN: We were getting a lot of bacteriologic specimens.

Interestingly, one of my relative weaknesses after completing the residency at Walter Reed was in the field of bacteriology, particularly bacteriology of enteric diseases and exotic diseases, and microbiology of exotic diseases--a lot of parasitology that I didn't know anything about. So it became a fantastic learning experience for me, because I had an extremely competent major who was a bacteriologist in my laboratory, and, through him, I was able to learn an awful lot about bacteriology, and, through our parasitologists, a lot about parasitology. These prisoners of war were walking museums of infectious diseases.

Q: Again, going back to the AFIP connection. Because you were gaining a lot of information about diseases which were not among American troops for the most part--these people were coming from a different culture, a different area and all that, that we'd never really dealt with before--were samples being sent or advice being asked or not?

DR. ZIMMERMAN: Well, yes, but that pattern had already been set up. This was one of the wonderful things that the Army had done; they had established this tremendous laboratory in Tokyo, the 406th Medical General Lab. And long before the Korean War, this laboratory was sending out field units to do all sorts of things. They had entomologists studying the transmission of Japanese B encephalitis. They were into all aspects of parasitology. It was an extremely large, well-staffed, comprehensive laboratory. So, once the Korean War developed and once epidemic hemorrhagic fever became a very important mystery disease...because this is one that hit our troops and hit them hard--a young, healthy soldier in the prime of life could be dead within a few days after coming down with manifestations of this disease. And it took several years to work out the epidemiology and microbiology of this acute infectious disease. This was done not only by personnel from the 406th, but also from the Walter Reed Army Institute of Research, which is just south of this building here on the campus at Walter Reed. So, yes, there was a lot of interaction with people from Washington.

As a matter of fact, relating to the AFIP, a program that had already been established during the period before the Korean War developed, but that escalated with the Korean War, was the sending out of staff personnel from the AFIP to be visiting professors. As a newly assigned officer at the 406th Medical General Lab, before I went to Korea, I had the nice opportunity to be assigned as a military escort to Dr. Webb Haymaker, who at that time was an internationally renowned neuropathologist who was head of neuropathology at the AFIP. He came out to be a visiting-professor type. He was not actually a professor, because he was a full-time employee of the AFIP, but he served as a visiting professor in Japan, visiting various Army hospitals, lecturing on various topics. And I was his military escort, so it was a nice opportunity. But it illustrates the

sort of interaction that did occur between the AFIP and field units at that time.

Q: You left Korea in '51.

DR. ZIMMERMAN: Came back at the tail-end of '51 and had a pleasant surprise to be assigned to the AFIP in February of '52. So actually next month I'll be celebrating the completion of my forty-first year at the AFIP.

Q: You started really in '52.

DR. ZIMMERMAN: As an assigned person at the AFIP.

Q: The director was...

DR. ZIMMERMAN: General DeCoursey.

Q: Elbert DeCoursey.

DR. ZIMMERMAN: Right.

Q: Could you give me a feel about the atmosphere as you saw it at that time? When you first arrive at a place, you get a feeling about something, which may change later, but it's a sort of a snapshot in time. About the organization, morale, esprit, and also the way it operated, what was your impression of the AFIP then? It was the AFIP at that time, wasn't it?

DR. ZIMMERMAN: Yes, it had become the Armed Forces Institute of Pathology, because unification of the armed forces had developed.

Q: We were now the Department of Defense.

DR. ZIMMERMAN: Right, the Air Force had been created, and the AFIP was now a tri-service institution. General DeCoursey, I think, was the first Director after...

Q: He followed Dart.

DR. ZIMMERMAN: But I believe General Dart was the Director when it was still the Army Institute of Pathology.

Q: It may well have been.

DR. ZIMMERMAN: My recollection is that General DeCoursey was the first director

after unification. A policy of having a tri-service rotation was established, and DeCoursey was followed by a Naval officer.

Q: Silliphant.

DR. ZIMMERMAN: Captain Silliphant, yes, and he in turn was followed by...

Q: Townsend.

DR. ZIMMERMAN: Colonel Townsend, Air Force. But DeCoursey was the first director when this became the Armed Forces Institute of Pathology.

Yes, I have several very firm impressions, one of which had to do with the friendly, cooperative atmosphere.

I've said some very nice things already about the 406th Medical General Lab, but the atmosphere there was sort of negativistic, particularly for a young, newly assigned individual. There was an atmosphere of, "Don't ask for too much support, because you won't get it. Don't be a bother to people. Everybody's busy. Don't get in the way." It was that sort of atmosphere. You really had to be persevering if you wanted to get certain things done.

Here, on the other hand, from the very beginning, even though I was a newly assigned guy and didn't even have a real job assignment, I found the atmosphere to be extremely friendly and cooperative, and everybody seemed eager to go out of their way to be helpful. It was a dramatic difference compared to what I had experienced either at Walter Reed or at the 406th Medical General Lab.

When I went so abruptly to the Orient after completing my training, and because of the war and so on, I was not able to take my examinations for American Board certification in pathology, as I would normally have done a year after completing the residency. So my top personal priority after assignment to the AFIP was to get prepared to take the examinations.

Now during the time that I was in Japan and Korea, there were many areas of bread-and-butter pathology that I felt very rusty about. For example, OB/GYN pathology.

Q: Not much of that in a wartime zone.

DR. ZIMMERMAN: Exactly. And in many other fields in which I was not involved I had become quite rusty. So I requested a period of rotation through various specialties, and every one that I asked for I got. Some of these were with some of the most outstanding pathologists in the world. So I'd move into their department for three months and get up to date on what was going on, and then move on to another department. And so it was a fantastic retooling experience.

Q: This is remarkable, because so often one thinks of, in any large organization, but certainly the military is, "Shut up and do your work. Your Boards are your problem. We

need somebody to do thus and so. Just do it." Did you have a feeling they were nurturing you, saying, "Gee, we like you and we want you to stay on."? Did you have the feeling that once you were onboard and if you were able to handle the load, that you could continue to stay at the AFIP? Or was this considered more a sort of another station on one's career path?

DR. ZIMMERMAN: I don't know that I ever entertained such grandiose thoughts, but certainly, if anyone had asked me, I would have said, "Gee, I'd love to stay here indefinitely."

After I had completed this rotation and it came time to settle down in one department (because a year and a half after I reported, I did take my Board exams and passed them, and so I was now a full-fledged, certified anatomic pathologist and ready to go to work), I asked for an assignment that would let me explore and amplify an interest that had developed during my residency at Walter Reed, and that was in the pathology of fungal infections. I had written a couple of papers, while at Walter Reed, on the subject. And my interest in infectious diseases had been augmented during the period that I was in the Far East. So I was interested in infectious diseases, but especially in fungal infections, and even developed such a passion for it that I thought, well, maybe what I really ought to do is to get a Ph.D. in medical mycology.

It so happened that at that time Duke University was *the* center for medical mycology, because not only did they have a pathologist who was a super-specialist in this area, but they also had microbiologists who were super-specialists in medical mycology. So I thought, for a pathologist to get Ph.D. training at a leading academic institution, Duke was the place to go. I applied to the Army to send me there for such training, and was turned down, because they said the Army doesn't need that kind of super-specialist training. So I was disappointed in that regard.

But I was working in the area, in pulmonary pathology. I was not the head, but I was working with an extremely competent individual, Sam Rosen, who is now deceased, but he was a super-star in the field of pulmonary pathology. He welcomed my assistance, because looking for fungi in granulomatous lesions of the lung was a very time-consuming affair, and being a very busy man with a heavy work load, he was very appreciative of anybody who wanted to roll up his sleeves and go to work and help him out. And so it worked out very nicely.

I also had the good fortune of dividing my time with Chapman Binford, who was head of the infectious disease unit at that time. He was a Public Health Service pathologist assigned to the AFIP because of his expertise in the pathology of infectious diseases.

So I spent part of my time with Binford in infectious diseases, and part of my time with Rosen in pulmonary pathology.

I was doing that sort of work until DeCoursey called me in one day, in the late summer of '53 (that was not too long after I had become Board certified), and asked me if I wouldn't like to try my hand at ophthalmic pathology, because my predecessor, Helener Wilder, had decided to retire, somewhat prematurely. She had been there for over thirty

years, but she was still a comparatively young woman and was not expected to retire. But she had a proposition for marriage by a prominent San Francisco lawyer, and she wanted to accept that proposal, and so she decided, rather precipitously, to leave.

Back in the early fifties, with one noteworthy exception, there were few, if any, general pathologists (that is, people trained in general pathology) who were spending any significant time on, or who had any interest in, pathology of the eye. The one exception was Edith Parkhill at the Mayo Clinic. She was doing head and neck pathology that included pathology of the eye. They made an overture to her, but she was nearing her retirement from the Mayo Clinic and she didn't think she'd want to start a new career.

So, in sort of desperation, they looked around. Who on the staff could they seduce into the field? And, for some reason known only to General DeCoursey, I guess, he approached me.

I thought it was a stroke of real good fortune for me personally, not because I had any preconceived notions or interest in pathology of the eye, but I just knew that it was a gold mine...in the figurative sense. Not a very rewarding field to be called a gold mine (if you were going to go out in the civilian sector and try to make a living doing ophthalmic pathology, you'd starve), except in terms of having a wealth of material available and having this tremendous inflow of material, not only from military institutions all over the place, but from the civilian sector. All through the war years, many of those few centers for eye pathology that had been established in academic institutions, had closed down because their personnel had gone off to war and they couldn't afford to continue functioning. So most civilian institutions all over the Nation were sending their eyes to the Medical Museum, and they continued to do so after World War II. As a matter of fact, when I succeeded Helener Wilder, I inherited a 5,000-case backlog!

Q: Good God.

DR. ZIMMERMAN: These were eyes that had not yet had a final report rendered to the contributor. For somebody who's just learning, this was really a gold mine!

Q: Oh, yes. I wonder, could you talk a little bit about Helener Wilder, sort of the legacy she left you.

DR. ZIMMERMAN: She was a remarkable woman in many respects. To begin with, she had come to the AFIP one month, to the day, after I was born. She came in mid-December of 1920; I was born in November of 1920. And she came right out of her training in McCallum's pathology lab at Johns Hopkins as a histotechnologist.

She came partly because she was still a teenager--I think she was eighteen or nineteen at the time--and her prospects for meeting a man were better in Washington. And indeed she did meet an attractive Army lieutenant, whom she married, and became Mrs. Wilder. She was Helener Campbell when she came to the AFIP. She married Lieutenant Wilder, but unfortunately, about a year and a half into their marriage, he developed acute appendicitis and died of a ruptured appendix. She remained a widow

from the early twenties until she decided to retire in '53.

During most of the early period at the Museum, she served as a general technician. But she came under the eyes of, and worked elbow to elbow with, some of the great names in our Army Medical Museum history--George Callender, Elbert DeCoursey, James etc, and wrote papers with many of them, because she had done such excellent technical work and even developed some new staining methods to enhance the work.

By the time World War II was approaching, she had become much more knowledgeable about pathology of the eye than all but a very few people in academia who were trained in pathology. People like Ash and DeCoursey had a great deal of faith in her abilities as a pathologist, so they just promoted her up, up, up, and she had never gained an academic degree. She, as I said, came to the Museum out of pathology histotech training that was just on-the-job training; it was not formal academic training.

Q: To me, this was sort of a high-school specialty.

DR. ZIMMERMAN: She went right from high school into the laboratories at Johns Hopkins and had on-the-job training, had never gone to college, never went to any professional school, but by the time she retired, she was at the top of the GS ladder. She was a GS-15. That was before they developed the super-grade system, but she was up at the top of the Civil Service rankings. She was signing out reports, which would not be permissible today; in those days they didn't have the medical legal problems of today. She was recognized for her work by President Eisenhower when the Women's National Press Club designated her "Woman of the Year in Science" in 1953. In 1955 she also received and honorary doctor of laws degree from Mills College, Oakland, California. ..

Q: With this large backlog, because this was the preeminent institution for this, in the first place, it must have been a problem for you, because who is this young kid, basically, a new boy on the block, only you weren't that young, but dealing with these. Who was around there to consult with, to develop your expertise?

DR. ZIMMERMAN: Well, things were made a bit easier for me. First of all, she did a great thing to help promote me. She liked me--why, I don't know, because I had never worked for her or with her. But she was very eager that I be a satisfactory successor for her, and she went out of her way to promote me. For example, she insisted that I go with her to a couple of national meetings of ophthalmologists, because at that time I knew no one in ophthalmology; my associations were entirely with pathology, and the only national meetings I had ever attended were meetings of pathologists. But she thought it was very important that I get involved in various activities of the national societies of clinical ophthalmology, and she took me around at those meetings and introduced me. She knew everybody. She introduced me to all of her friends and key people in academic ophthalmology. Actually I became her successor at one of these small clubs of ophthalmic pathologists. So she went out of her way to promote me and to facilitate my becoming integrated into the field, and made sure that people knew that I was a

competent person, even though I had never written a paper on the subject that could support me; so she really did facilitate things.

The other helpful thing was that this was still the Korean War period, because the Korean activities were still going on, and as a result, there was a good bit of manpower available. As a matter of fact, there was a surplus of ophthalmologists in the military. The AFIP, with its 5,000-case backlog, was able to have assigned to the Armed Forces Institute of Pathology individuals who had had some training in ophthalmic pathology. They were basically clinical ophthalmologists, but they had had some extra training in ophthalmic pathology, and they were assigned to the AFIP to help out. There were two such individuals who had been working with Helenor Wilder for over a year before I was recruited to take charge. These two doctors did not have Boards in pathology, but they did have Boards in ophthalmology, and they had had a year of experience working with her, so they were, at that time, much more competent than I. They were very, very helpful in getting me initiated, in helping to train me, and in introducing me to ophthalmologic terminology. They became a fantastic resource for me to have working with me day in and day out. Both of them, fortunately, stayed with me for about a year. They were two-year people; as soon as their two years of military service were fulfilled, they left the service and went off to the civilian sector. But during the year that I had each of those men, they did an awful lot to help me learn faster than would have been possible all alone.

And then I had a succession of other individuals like them who continued to be assigned for varying periods of time as long as mobilization was...

Q: Nothing like a war or a wartime emergency Act to produce professionals. Could we talk a little about the administrative side of the AFIP at that time? General DeCoursey was in charge. You had here a backlog of 5,000 cases. Was this a priority--let's devour these and get these out of the way so we can get current? Each department must have had its own problems--some were up to date, some had backlogs and all that. Was DeCoursey breathing down your neck to do something about this?

DR. ZIMMERMAN: Not really. Let me say, first of all, that Mrs. Wilder had done the right things in deciding what cases could be set aside. For example, if an eye were removed from a patient because it was thought to contain a cancerous lesion inside the eye, the eye would have been opened, and if a tumor or some simulating lesion was found, a piece of it would have been taken for a preliminary diagnosis. So the patient was not being short changed, nor was the ophthalmic surgeon who had removed the eye--they were getting a preliminary report. But then the eye went into the backlog, to wait its turn until the technicians could produce the final type sections. At that time, an old-fashioned process using celloidin embedding was the ritual, and this was a time-consuming procedure. That in part was responsible for the large backlog. So a preliminary diagnosis would have been rendered; it was the final definitive report that was taking four or five years to make its appearance.

But this proved to be an extremely rewarding experience for me. For example, if

a patient had a malignant tumor, and I rendered a final report, gave a full-blown description of the tumor, classified it cytologically and so on, then I could tack on to the end of the report, a comment stating, "We would appreciate your providing follow-up information." Well, this was now five or six years after the eye had been removed. So the ophthalmologist would get this report, and very frequently he would respond by writing, "Oh, by coincidence I saw Mrs. Jones in my office last week. She's done well. She's had no further problems." So here, within a week or two after rendering a final report, we would get a five-year follow-up report.

Q: Well, again, back to the administrative side. Was each department self-contained, or would you all get together and decide how to allocate resources? Did they each march to their own drum?

DR. ZIMMERMAN: I think a lot of the latter was the case. I think there was a tremendous amount of flexibility. Each department had its own idiosyncracies, its own peculiarities. Some heads were much more resourceful, much more conniving, were able to more successfully build a big empire. Others were not quite so ambitious or eager to participate in empire building. So, over the years following World War II, some departments grew much larger than others, not necessarily because there was any intrinsic reason why that should be the case.

In some instances, there were reasons. For example, in eye pathology, in bone pathology, and in neuropathology, there were some technical reasons why special equipment, special histopathologic techniques were needed to accomplish the sorts of things that it was felt the AFIP ought to be doing because they couldn't be done as well in other institutions.

But there were other areas where there weren't such intrinsic reasons to account for some of the discrepancies in space and personnel and equipment. I was never in a position to really explain for the logic or lack of it to explain how or why Departments grew in such an irregular fashion.

Q: Had you been with the AFIP when it moved from its old quarters to here?

DR. ZIMMERMAN: Oh, yes. As I indicated, I reported to the old Museum building, where the AFIP was located in 1952, and we remained in that building until '55, which I believe was the year we moved out here.

Interestingly, one of the things...you asked me to reminisce about the days down at the Museum - we were, by comparison, a much smaller group of people at that time. There was one conference room where people would gather with their brown bags at noontime each day and have lunch together, in a very informal setting. People would wander in and wander out. And very often General DeCoursey would sit in with us and sometimes have an informal staff meeting while everybody was brown-bagging it. During this period, one of the recurring themes was the plans for the new building.

It so happens that a pathologist with whom I was a resident at Walter Reed (I

think he finished his residency at Walter Reed the year before I did) was Colin Vorder Bruegge. He eventually became a General and actually was the Commanding General at Walter Reed. But at the time when General Dart was the director, he had appointed Vorder Bruegge to serve as a pathologist consultant to the architects who were designing this building and he lived with those architects. He gradually became as experienced in architectural designing of laboratories as in pathology because he spent so much more time working with the architects than he did as a pathologist. But he did have space in the Museum building, and at lunch timehe would sit in with the rest of us when he was in town and bring us up to date about what was going on and the plans for the new AFIP. He had blueprints there if anybody was interested in seeing what was being planned. And, of course, he would pick the brains of the staff to get input from them. So that was one of the things that was happening during that three-year period before we moved out here.

Q: Did you find coming out here was a step up as far as equipment, space, and all that?

DR. ZIMMERMAN: Yes, no question about that.

Again, an interesting anecdote regarding my predecessor, Helener Wilder. She was a person who loved the locale on the Mall. She was an outdoors-type person. That old-fashioned building had huge windows, and she would always throw the windows open and let the air in, even in the summertime. It was totally non-air-conditioned, so it was a little unpleasant to open the windows in the heat of the summer. But she would go out for a walk on the Mall every day at noontime. She'd take her apple out there and munch on an apple every day, or go for a walk. But she loved to have a room with windows, and she swore that if they had ever tried to make her occupy the quarters that I occupied when we moved in here, which was totally devoid of windows, she said she would have resigned.

Q: It is a nuclear-proof building. It's about the only government office building that was made that way.

DR. ZIMMERMAN: Made atomic bomb-proof, but, unfortunately, by the time it got built, it was already obsolete, because the H-bomb had come along, and no building is H-bomb-proof. So a lot of extra money was spent and a lot of space was lost, if you think in terms of how much space you can get for your dollars. They had to put a lot of extra dollars, at the sacrifice of space, in order to build an atomic-bomb-proof building that was obsolete before it was built.

Q: What was the feeling after the whole move here as far as the Army and your feeling towards the use of the Army Medical Museum? I remember this as a small boy. I lived in Annapolis, and the Army Medical Museum was one of the things all of us went to see on the Mall. And now that it's out here, it's virtually unheard of by the people who come to Washington. What was the value, as far as you were concerned, of the Museum?

DR. ZIMMERMAN: Well, I think there is no question but it had long been wonderful public-relations institution and one that served a considerable educational purpose. There were many people who first learned about pathology as a result of a visit to the Army Medical Museum. And for quite a while we had a solution to the problem, because we didn't pull out lock, stock, and barrel and leave the Museum immediately. There was a period of several years when the old Museum building continued to function as a public museum and also to provide additional space for some of the staff. It was like an annex.

But then Mr. Hirshhorn propositioned President Lyndon B. Johnson to accept a collection that he valued at twenty-five million dollars, if the government would build an appropriate museum for the collection on the Mall. Well, then Lyndon Johnson and his colleagues decided the only piece of property on the Mall that could be made available for a Hirshhorn museum was the old Army Medical Museum. By that time, the Museum had already become officially designated a national historical landmark. But apparently the president can override that, and by decree he decided the famous Army Medical Museum would have to go.

And that's how we got the new south wing to this building. Everything that's just south of this T.V. studio is a new wing that was tacked on to the original building, and that was to compensate for the loss of the Museum that was down on the Mall.

So that's when the public Museum had to move from down there and move out here. And there's no question; you can just look at the attendance figures and see that the number of visitors per year fell to a small fraction of what it had been.

Q: There are several functions: the research and consultation, but also training. Could you talk a bit about the change in training, as far as the AFIP is concerned, from the time when you came in, in the early fifties, until now?

DR. ZIMMERMAN: Well, actually, ophthalmic pathology occupies a very important place in the annals of training activities. A group of very eminent ophthalmologists, who were among the most important, most influential leaders in American ophthalmology had had as part of their training back in the twenties and before, what was considered *the* thing to do, to go to Europe to get the best training for an academic career. As a result, they saw what was being done in Europe in pathology of the eye. So when they came back to the States, they were appalled to see what was *not* being done in ophthalmic pathology. As a matter of fact, in most centers around the country, the eyes were just being thrown into the trash can, because there was nobody in the community who was equipped or interested or trained to do anything with these eyes. So they went into the trash can. Some of these leading figures, most notably Dr. Harry Gradle of Chicago, approached the Army Medical Museum, which was then headed by George Callender.

Q: He was there, really, from 1920 to 1929.

DR. ZIMMERMAN: Right, so it was early in his tenure; it was back around '20 or '21.

And he was entirely sympathetic and receptive to the proposition, but he said, "You have to clear it with the Surgeon General." So they went to see the Surgeon General of the Army, who gave his approval. And they agreed to contribute a certain sum each year (it was meager money, something like five hundred dollars a year) to pay for a technician who would help process these eyes that would then be coming in from ophthalmologists around the country.

And this set the stage for an extremely important contribution that Callender himself made. There is what is known even to this day as the "Callender Classification of Malignant Melanomas of the Eye". Because he was the Curator of the Museum and he was interested in learning pathology of the eye, he took a special interest in these eyes that had been removed for the most important cancer of the adult eye, and that's malignant melanoma. He became a super-expert in the field and started up the registry program, whereby after rendering a diagnosis you don't file and forget the case, but periodically you check to see how the patient is doing and you get long-term follow-up information, so that you can then be in a position to correlate what you learned from pathologic studies with what happens to the patient subsequently. This has permitted a whole series of studies that are ongoing to this day.

So Callender was right at the forefront, but it all stemmed from his cooperation with the civilian sector in doing something that had never been done previously. And that actually formed the basis for what we now call the American Registries of Pathology. The Registry of Ophthalmic Pathology was the first official registry to be created specifically to make it possible to undertake long-term follow-up investigations of how patients with certain diseases fared after having been treated for those diseases with a variety of therapeutic methods. That was in 1921.

Q: With training, when you first came and were in charge of ophthalmic pathology, were people coming in to be trained for a while, or was the training pretty much picking up these doctors who were in military service and they'd go through and go out? And has that changed over the years as far as your specialty?

DR. ZIMMERMAN: Several things had already been established in an effort towards improving post-graduate training.

Once this registry was set up, once it was a fait accompli between the American Academy of Ophthalmology and the Army Medical Museum that they would interact to establish this histopath lab to process eyes, the next thing that was done was that as the Museum staff developed more and more experience, they were then asked by the Academy, "Won't you put up exhibits at our annual meetings to show what you're learning?" Because there were still a lot of eyes in many communities that were going into the trash heap rather than being sent to the Museum, and these leaders in American ophthalmology were very anxious to change that, to have it a routine procedure that every eye would be sent to a pathology laboratory for a thorough examination. So they were anxious to show the importance of this in the form of exhibits. And for many years the Museum staff did provide exhibits of what they were seeing, what they were learning, and

what's in it for ophthalmology to be sending these eyes to Washington.

The next thing that they did was to offer courses at the annual meetings of the American Academy, and then develop courses that would be given here at the AFIP, so that people coming in from elsewhere could come here for courses. When I took over, the courses were really very modest; there were thirty to forty people per class, once a year. Well, we gradually got up to the point where we were giving courses twice a year, attended by a hundred and fifty to two hundred people at each course. The interest in getting training increased greatly, and has continued to the present time. A major influence in this growth of interest in ophthalmic pathology was the American Board of Ophthalmology's attitude that it was important for opthalmolgists to know a good bit about ocular pathology. Back in the fifties and sixties a major reason for failure to pass the examinations was a lack of adequate training in ophthalmic pathology - a profound stimulus for our program!

A third thing that developed about the same time was the idea that these few military people who could get assigned here and profit by it, that this same sort of thing should become available to others who never put on the uniform. So, through the National Institutes of Health, that was into training back in the sixties, there developed a special fellowship program. And we were able to obtain NIH support, as well as other philanthropic support from national eyes societies, to send young people who had been trained in ophthalmology or in pathology, who wanted to learn about pathology of the eye, here for six months to a year or more to obtain advanced training in ophthalmic pathology. This whole program really took off, beginning shortly after we moved into this building, because there had been very limited space down in the old building.

Q: I might, for the record, mention that with your training and all that, the American Journal of Ophthalmology *dedicated its November 1990 issue to you on your seventieth birthday, particularly because of your outreach on the training side, that many people not just from the United States, but from other places have come.*

DR. ZIMMERMAN: Yes, I'm very proud of this. I might also point out that this journal was published on November 15, so that was precisely on my seventieth birthday, to the day! Yes, I've been very proud of the fact that I have had a very large number of excellent trainees over the years. Many of these individuals were not only outstanding at the time that they were in training, but many of them have pursued outstanding academic careers. And I have now a large number of former trainees who have become professors and heads of departments at major institutions, not only in this country, but abroad. So it's very nice to see your progeny proliferate in that way.

Q: Well, tell me, to follow through on this, looking over a period of time, have you found a change in the AFIP's role, particularly because you took charge and have been in charge of really one of their major specialties, ophthalmology, which goes back since the 1920s? Have you seen a change (we're now talking about 1993) in the role of the AFIP? Have university hospitals taken over more of this type of role? Where does the AFIP

fold into this today?

DR. ZIMMERMAN: Certainly the AFIP is still providing a very important service. However, it has now a great deal of competition that it didn't have when I began. My entrance into the field was made comparatively easy by the fact that I had hardly any competitors. There were very, very few people who were well trained who were in the field of ophthalmic pathology, and really none of them doing ophthalmic pathology on a full-time basis. Gradually since then, more and more people who have been well trained have entered the field, and many of them are these people that I was just bragging about. Some of the major institutions around the country, like Hopkins and Harvard, have ophthalmic pathologists who obtained all or at least a significant part of their pathology training here at the AFIP. And they are continuing to do outstanding work. And obviously people at the local level, in community hospitals, don't have the need to package up their eyes and ship them to the AFIP as they did back in the forties and fifties and even well into the sixties. So gradually our workload has diminished in ophthalmic pathology.

On the other hand, there is a continuing need for consultation, and so our proportion of cases sent in consultation versus those that are being seen for the first time by a pathologist has changed. Back in the thirties and forties and fifties and even into the sixties, most of our work was first-echelon work. We were, here at the AFIP, the first pathologists to look at a case. Now, an increasing percentage of our total volume is accounted for by cases that have been studied at the local level, deemed to be difficult diagnostic problems, and then sent to us for opinions. So there has been a shift in the character of the work.

Q: I'll give you a list here of the various directors of the AFIP. Which ones would you point to during your time that really struck you as being the most influential as far as you were concerned?

DR. ZIMMERMAN: Well, in terms of my being personally affected, there's no question General Albert DeCoursey was the single most important one.

Q: He put his finger on you.

DR. ZIMMERMAN: That's right, he tapped me. On the other hand, Doctor James Ash, and before him, George Callender, did so much to get the old Museum personnel and the American Academy of Ophthalmology to interact in a favorable fashion. So when you have this legacy of two outstanding groups of people working together harmoniously that's been going on for a period of thirty years, that was very important, and particularly when that had been fostered by people who had the stature of George Callender and James Ash. To have had those two individuals responsible for what had gone on for thirty years before me, that was a very important contribution, even though, as far as tapping me on the shoulder and saying, "Would you like to...", General DeCoursey was

the most significant person for me.

He, by the way, also played an important role in his earlier years, because when he was a Captain, he worked at the old Museum when Colonel Ash was the curator, and one of the early atlases of ophthalmic pathology was prepared by them, by Col. Ash and Capt. DeCoursey. So he had a lingering interest in ophthalmic pathology and had invested a good bit of his earlier years working in ophthalmic pathology. To me, this was another important factor, the fact that he asked me to get interested in the field when he himself had had this background. That showed me that he had faith in me and had a great interest in seeing this field continue to develop successfully. So that was extremely important.

I'd say General Blumberg was another person who..., actually I had pretty good support from a whole succession of these Directors--Silliphant, Townsend, Bruce Smith--all were very supportive in my early years. But they didn't have the same background of experience and interest, but nevertheless were continuing to be supportive.

Q: Looking back on your career, what do you think makes for a good pathologist? If a young man or woman came in and was interested in pathology, what would you be looking for in them that would make for a good pathologist?

DR. ZIMMERMAN: That's a difficult question. That probably could be expanded to another hour-and-a-half discussion.

First of all, you should understand, as I mentioned right at the very beginning when I referred to my own medical school introduction into pathology, that the way medical students are introduced into pathology over the years at various institutions has not always been the same. There have been some institutions that have stressed the experimental approach and the basic-science approach vis-à-vis the more clinically oriented approach that I was exposed to.

And so, in terms of answering your question, there are superstars in pathology, including some who have been either awarded the Nobel Prize or considered potential candidates for Nobel Prizes, who obviously have used the basic-science and experimental-medicine approach to their work, and which made them candidates for such awards. Now that type of individual is often not the sort of individual who is nearly as interested in working with clinicians and integrating the clinical side of medicine with data that pathologists can contribute.

And with the technical advances that have developed in medicine, I think the preparation for modern-day pathologists is becoming increasingly very different from the sort of thing that led me to gain whatever success I had in my career--the development of such important new methodologies as electron microscopy, histochemistry, immunohistochemistry, genetic engineering, computer technology, etc. has made the preparation for modern pathology so much more demanding than it was when I began my career. Increasingly, pathologists in many fields are becoming indistinguishable from basic scientists. The questions being asked by pathologists and the solution of perplexing problems often require the exploitation of some of the new technologies that have come out of the basic-science areas.

So the more of these technologies, the more of these areas of scientific endeavor that a budding pathologist has been able to master, the better prepared he's going to be to establish his niche.

And yet I think there's going to be a continuing great need for pathologists whose primary concerns are the welfare of the patient and what he can contribute to the immediate problems that patients in the hospitals have. These are often very different aspects of pathology from those that would prepare an individual to perhaps someday be a candidate for an important prize.

Q: Well, Dr. Zimmerman, I want to thank you very much for this. Obviously, we could go on, but I think this has given me certainly a much better insight into the area which you've been dealing with for forty-one years now. Thank you very much.

DR. ZIMMERMAN: Well, it's been a pleasure to chat with you.